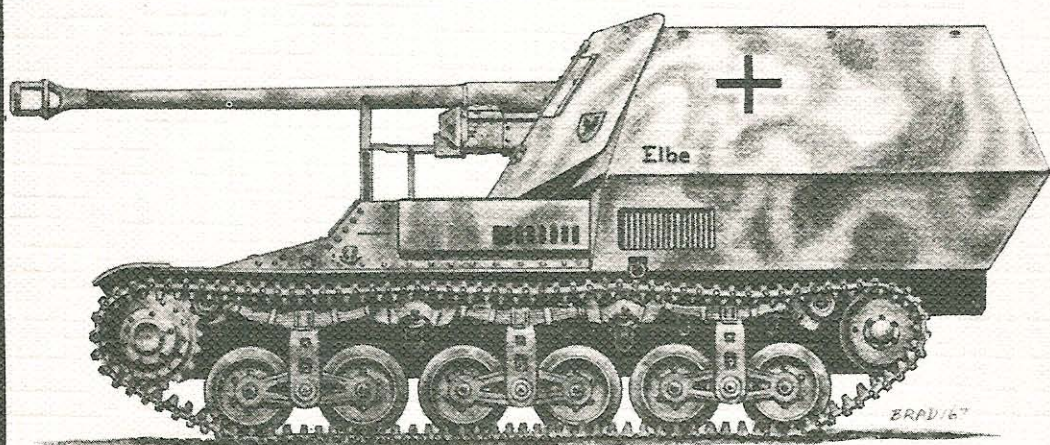


# German Army S.P. Weapons 1939-45

## Part 2



## Handbook No.1



FOREIGN-BUILT FULLY TRACKED CHASSIS

Compiled by P.Chamberlain and H.L.Doyle

50p

# SELF PROPELLED WEAPONS OF THE GERMAN ARMY 1939-45

## Part II ~ Foreign Built Fully Tracked Chassis.

Compiled by Peter Chamberlain and Hilary Louis Doyle

### Introduction

This booklet is the second part of a work which is an attempt to accurately list all of the known Selfpropelled Weapons regularly used by the German Armed Forces during the Second World War. In addition to the Armed Vehicles, modified specialised types are also covered as they are more akin to the Selfpropelled vehicles than the Tanks from which they originate.

For clarity, this list has been divided into several sections. This has been accomplished by classifying a vehicle by its chassis, rather than by the type of armament it carried. PART 1 dealt only with those weapons which were mounted on fully tracked chassis or carriages, manufactured by the German Motor Industry. The vast range of captured vehicles which was used to carry weapons incorporated in the German equipment lists, are the subject of this HANDBOOK NO. 1. PART I. The next subject for inclusion in HANDBOOK NO. 2, Parts I, II and III will be German Semitracked vehicles.

In this series of HANDBOOKS' the full title or titles of each type of equipment is given. As far as is known, they are all the correct 'Official Designation'. Where two or more titles are shown, the first listed is the original one, and the others are ones that appeared in use afterwards. For example the captured Russian Antitank gun 7.6cm PAK 36 (r) mounted on the Panzerkampfwagen 38 (t) was originally designated; as the 'Pz.sfl.2 fuer 7.62cm PAK 36' next it was the 'Panzerjaeger 38 fuer 7.62cm PAK 36 (r)' and finally Hitler authorised the official name 'Marder III' in 1944. In the case of some of the Foreign vehicles the original designation of the country of origin is given - enclosed by brackets. This mainly occurs where existing selfpropelled weapons were accepted for German service without modification, as was the case with Italian Semovente Assault guns.

As will be remembered from HANDBOOK NO. 1 - Part I, a system of allotting numbers for each special motor vehicle was used by the German Ordnance Department. These 'Sonderkraftfahrzeug' numbers simplified reference to any vehicle as titles were often cumbersome. Whilst this system was virtually universal for all German manufactured vehicles, only a very few Foreign equipments received numbers. In fact, only two basic chassis - one, the Czechoslovakia TNHPS (Pz.Kpfw 38 (t) which although it originated from outside Germany became standard German equipment and about 5,000 units were produced and output was only stopped by the war situation in 1945. The second type to be adopted as standard German equipment was the French 'Tracteur Binde 38 L' - Munition transport Kw. auf Lorraine Schlepper (f).

Many of the vehicles shown in this series of HANDBOOKS have already been or will be in the future, dealt with, in considerable detail in the BELLONA MILITARY VEHICLE PRINTS Series. Each issue in this series deals with specific vehicles, not only German, but from every AFV producing country in the World. Each vehicle is dealt with in the most highly detailed way. Drawings generally showing five views including a sectional one, are the most accurate and detailed available. In addition there is a full page historical and technical data on each type plus photographic illustrations. Because many additional photographs are given in this series of Booklets, they serve as an ideal supplement to the Military Vehicles Prints.

This series of HANDBOOKS could not have been compiled without the kind help of the Staff of the Photographic Library, of the Imperial War Museum. To express our gratitude, we have shown all of the numbers of Imperial War Museum Photographs, so as to facilitate our Readers who wish to reorder large copies of these photographs for their collections. In addition from these photographs we have printed, one can see the scope of the collection available to the Public. It must be remembered that this is the biggest collection in the World. Full details of the various sizes of Photograph supplied and of the slides available, can be had from the Orders department of the Imperial War Museum, Lambeth Road, London, S.E.1.

Further, thanks must go to the Curator of the R.A.C. Tank Museum for his help in developing the Photographic Collection available to the Public. The Tank Museum also gave a large collection which is available. Details can be had from the Curator, R.A.C. Tank Museum, Bovington Camp, Wareham, Dorset, England.

Finally, sincere thanks are due to all those who through contributions or advice have assisted the Authors and thus helped to make this work available to all students of Armour. In particular, we mention Col. Robert J. Icks (U.S. Retd.) and Walter J. Spielberger, M.S.A.E., Armin L. Sohns and Axel Duckert, Jnr.

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#### PART 1 - GERMAN BUILT FULLY TRACKED CHASSIS.

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# Czechoslovakia

March 1936 saw German troops return to the Rheinland thus commencing the chain of events leading to the outbreak of the Second World War. Exactly two years later Austria became part of Greater Germany, from this position of strength Hitler turned to Czechoslovakia. Again on March 15th 1939 German units crossed into Czechoslovakia and that country disappeared as a sovereign State. The benefits to Germany were enormous. Besides taking one of the best equipped and entrenched armies out of the field, there was the vast industrial complex around Prague and Pilsen. The most important of all being the Skoda Works. Equipment taken from the dispersed army was impressive and was immediately examined and passed for use by the Wehrmacht. Most notable from the point of view of the student of armour was the excellent light medium tanks and the 4.7cm Antitank gun – which was soon mounted on the chassis of the Pz.Kpfw 1.

The tanks were the Skoda S-IIa(LT35) mounting a 37mm gun which was basically a sound vehicle but with limited performance, and most important was the new design which had appeared in 1938, the TNHP. This vehicle was a development of a very successful line of tanks produced for export by the firm of Ceskomoravska Kolben Danek Praga of Prague.

All of the available tanks of these types were absorbed into the Wehrmacht so that by the eve of the invasion of France in May 1940 there were 381 Czech vehicles listed on OKH inventories – equipping three of the ten Panzer Divisions in the field. This number was exactly equal to the number of Pz.Kpfw III available. The LT 35 was given the German designation of Pz.Kpfw 35 (t) while the TNHP became the Pz.Kpfw 38 (t). In service the 38 (t) proved itself and compared very favourably in performance, armour and armament to the heavier German Pz.Kpfw III. Production of the Pz.Kpfw 38 (t) was therefore

continued under German management (the firm was renamed Boehmsch-Maehrische Maschinenfabrik A.G.) and continued until early 1942 when tank production was suspended, a total of 1168 tanks having been manufactured.

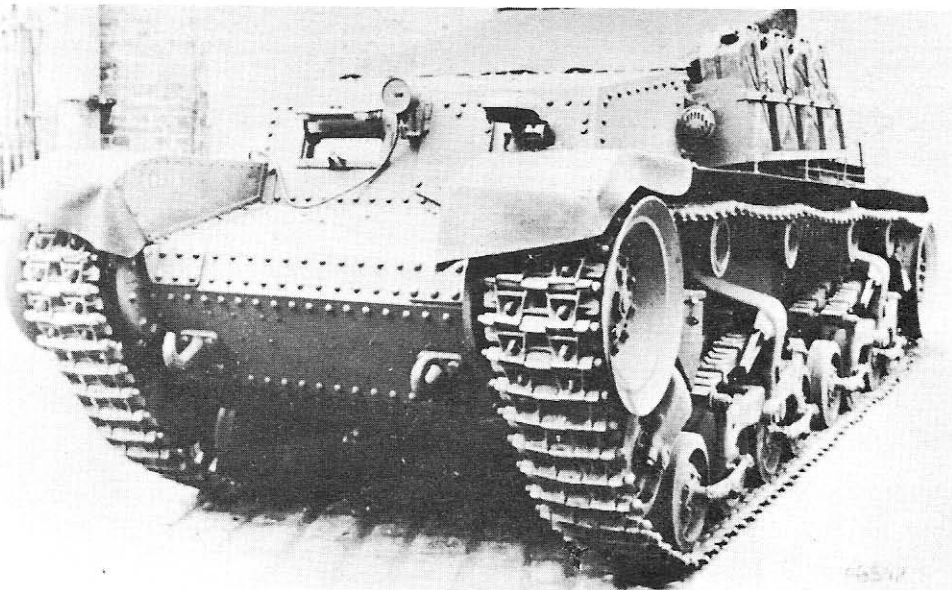
The Pz.Kpfw 35 (t) was virtually obsolete by 1941, so after the invasion of Russia and the subsequent appearance of the superlative Russian tanks T34 and KV1, they were useless as fighting tanks. Only limited numbers were utilized as tractors and mortar carriers, the majority of servicable vehicles were handed over to the Roumanian and Bulgarian Armies who were already using these Skoda tanks. The service life of the Pz. Kpfw 38 (t) was also cut short by events in Russia. Possible development for a heavier armament than the 3.7cm was prevented by the small turret and the size limitations of the chassis.

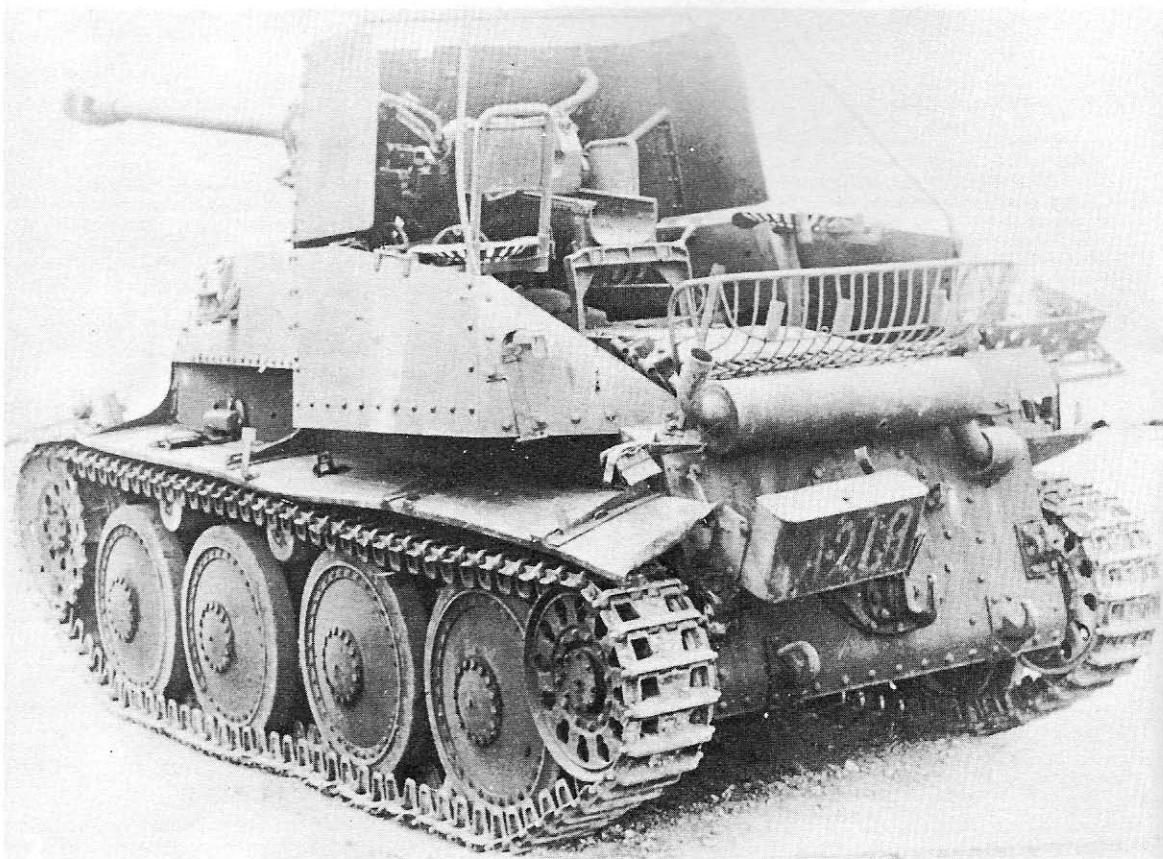
By December 1941 it had been decided that in order to even maintain failing strength of armoured units, it would be necessary to supply them immediately with as many heavy antitank weapons as possible – preferably selfpropelled. Thus in March 1942 B.M.M. were ordered to suspend production of the Pz.Kpfw 38 (t) as a tank, but to continue production of the chassis which was to form the basis of a self-propelled carriage.

1942.  
Zug Mittlerer 35 (t).  
Munitionsschlepper 35 (t).  
Crew: 2.  
Weight:

This was the old Skoda LTM 35 tank converted by the removal of the turret. When these tanks became completely obsolete as battle tanks – in Russia 1941, there was a pressing need for more fully tracked tractors and carriers to keep the front line units supplied despite weather conditions.

1942.  
Moerser Zugmittel 35 (t).  
8cm Mrs auf 35 (t).  
Crew: 4.  
Weight:  
Similar modification to above – turret removed.  
8cm Schwerer Granatwerfer 34 mortar carried in turret well.  
(Photo: 1).





1941/42. Sd.Kfz.139.

Panzerselbstfahrlafette 2 fuer 7.62cm PAK 36.

Panzer Jaeger 38 fuer 7.62cm PAK 36 (r). (Marder III).

Crew: 4.

Weight: 10.8 tons.

While the recently introduced 5cm PAK 38 proved ineffective against new Russian Armour in 1941, the heavier 7.5cm PAK 40 was not yet in production. To offset this disadvantage in as short a time as possible the German Ordnance Department arranged to have many of the captured Russian 7.62 FK 296 rechambered to take the PAK 40 cartridge – thus allowing its use in German service. Starting regular production in March 1942, 344 of these weapons were mounted on the Pz. Kpfw 38 (t) Ausf G and Ausf H chassis. A high proportion of these Panzerjaegers served with the D.A.K. in Africa.

(For full information see Bellona Prints, Series 10.)

(Photo: 2).

1943. Sd.Kfz. 140/1.

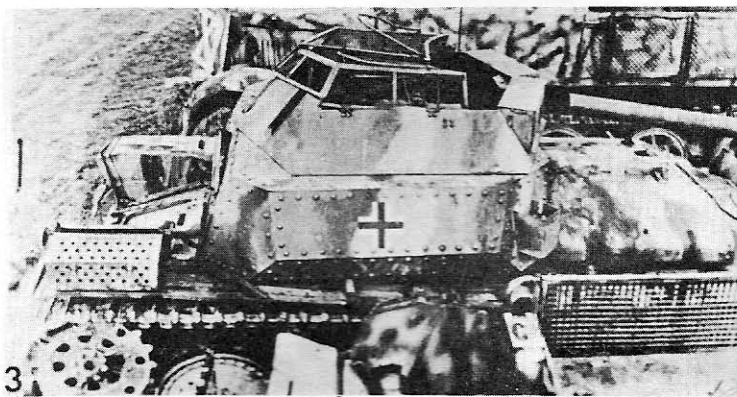
Aufklaerungspanzer 38 (t).

Crew: 4.

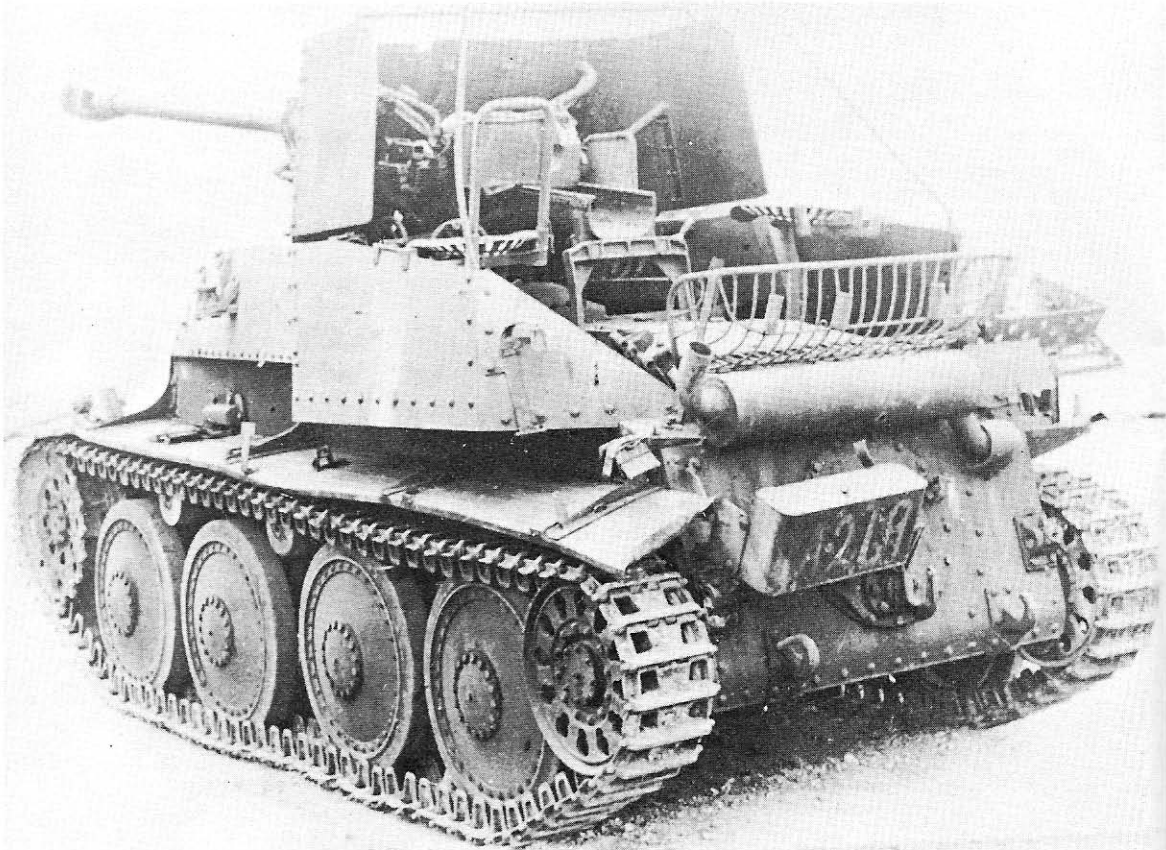
Weight: 9.75 tons.

Restricted cross country performance of the main reconnaissance vehicles – the Semi tracked Sd.Kfz 250 series and normal armoured cars led to the requirement of fully tracked vehicles to perform this task. Originally 'Panzerspahwagen II Luchs' was developed for the purpose, but soon after its introduction it was abandoned as being too costly to produce (May 1943). In October 1943, it was decided to utilize the Pz.Kpfw 38 (t) chassis wedded to a turret from the Sd.Kfz. 222 series of Armoured Cars.

(Photo: 3).







1941/42. Sd.Kfz.139.

Panzerselbstfahrlafette 2 fuer 7.62cm PAK 36.

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(For full information see Bellona Prints, Series 10.)

(Photo: 2).

1943. Sd.Kfz. 140/1.

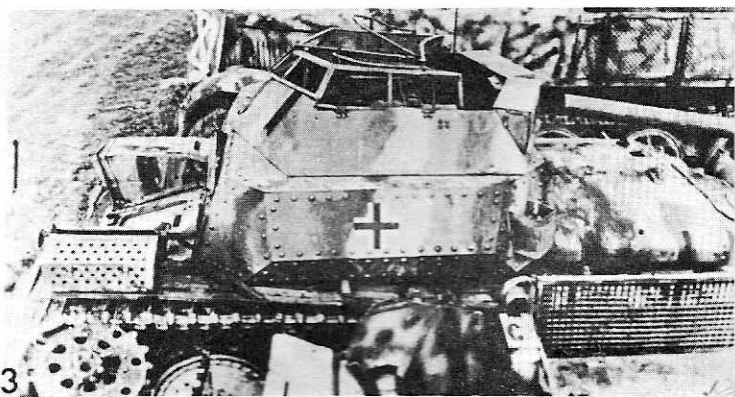
Aufklaerungspanzer 38 (t).

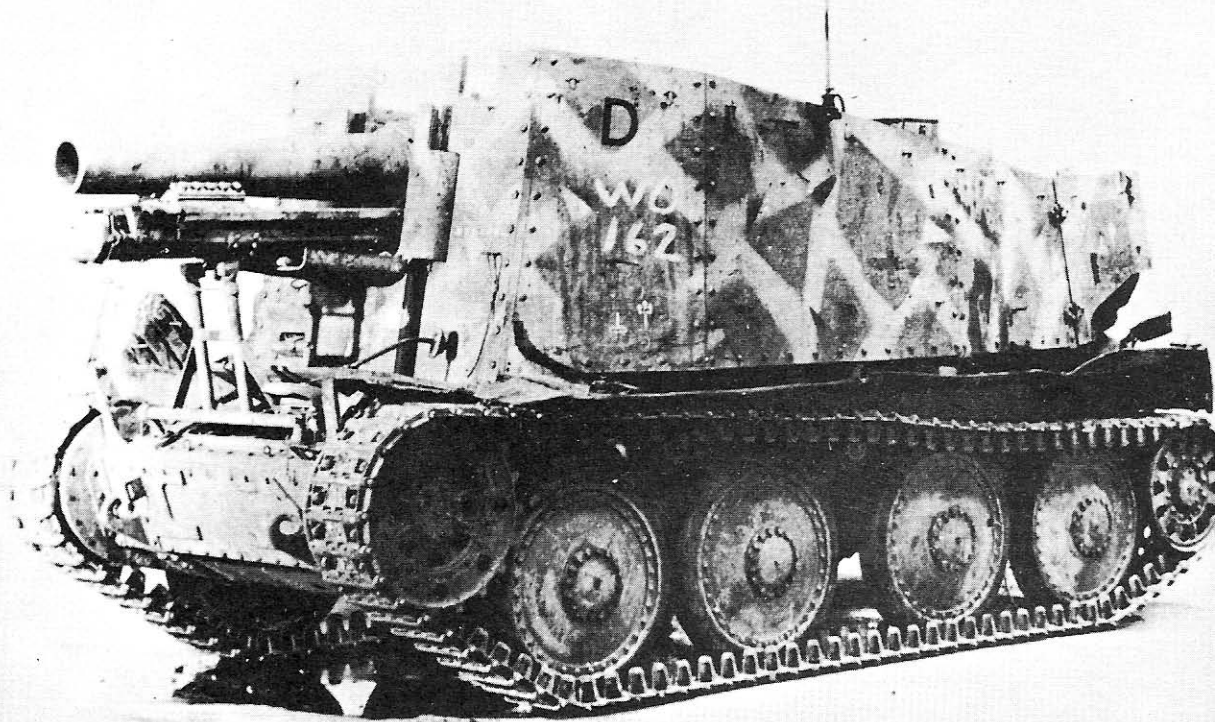
Crew: 4.

Weight: 9.75 tons.

Restricted cross country performance of the main reconnaissance vehicles – the Semi tracked Sd.Kfz 250 series and normal armoured cars led to the requirement of fully tracked vehicles to perform this task. Originally 'Panzerspaehwagen II Luchs' was developed for the purpose, but soon after its introduction it was abandoned as being too costly to produce (May 1943). In October 1943, it was decided to utilize the Pz.Kpfw 38 (t) chassis wedded to a turret from the Sd.Kfz. 222 series of Armoured Cars.

(Photo: 3).





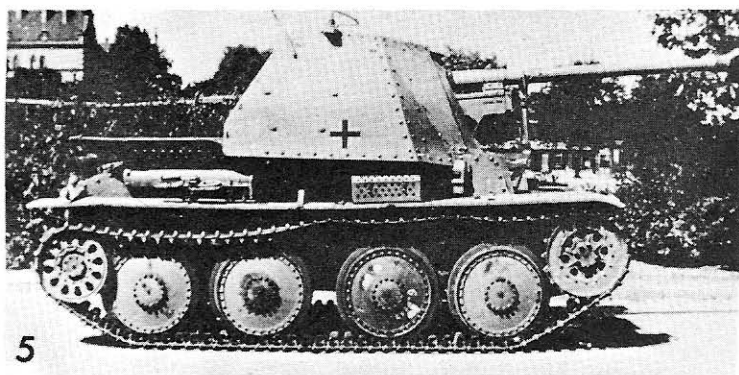
4

1942/43. Sd.Kfz. 138/1.  
15cm sIG.33 (Sf) auf Panzerkampfwagen 38 (t) Ausf. H 'Bison'.  
Crew: 4.  
Weight: 12.7 tons

Turretless chassis of the Pz.Kpfw 38 (t) utilized to carry the standard Infantry Howitzer. A rather rough modification, the superstructure armour was only mild steel. These guns saw service on all fronts. (Photo: 4).

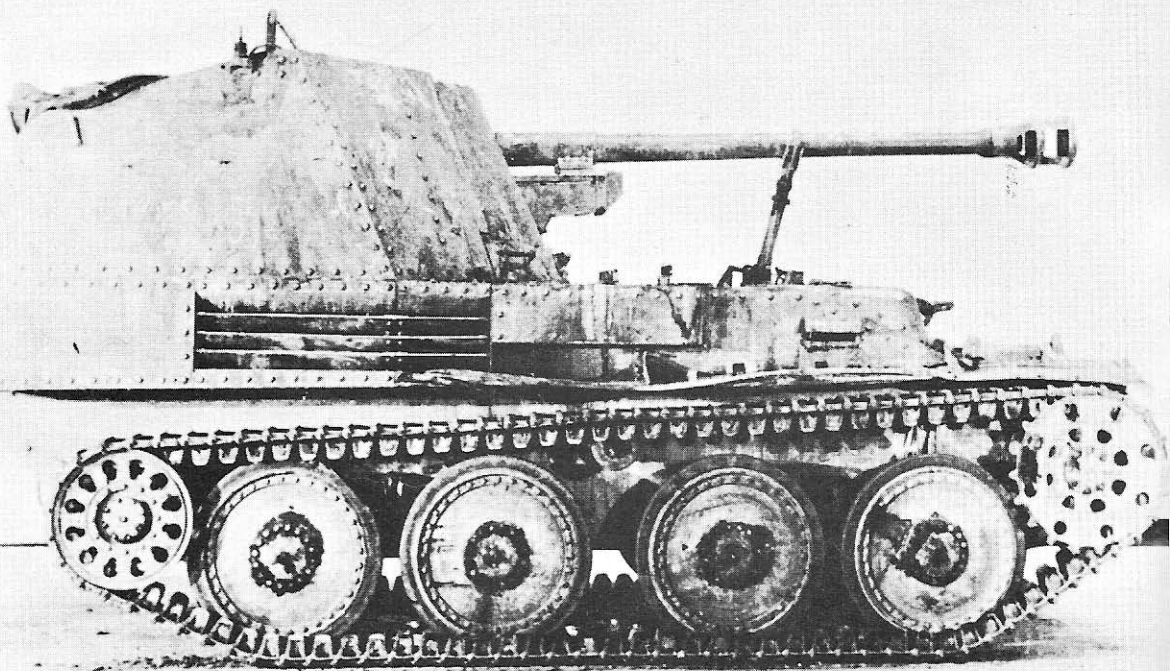
1942/43. Sd.Kfz. 138.  
7.5cm PAK 40/3 auf Selbstfahrlafette 38 (t) Ausf. H.  
Panzerjaeger 38 (t) 'Marder III'.  
Crew: 4.  
Weight: 10.8 tons.

In May 1942 the PAK 40 became available but it was not built on to the chassis of the Pz.Kpfw 38 (t) to help in the Antitank defence until later that year. The conversion was somewhat better than that of the Sd.Kfz. 139 but lacked refinement. Units fighting in Tunis were amongst the very first to receive this equipment. They remained in production until the purpose designed carriage based upon this chassis became available in March 1943. (Photo: 5, MII 7743).



5





6

1943/44. Sd.Kfz. 138.

Panzerjaeger 38 (t) Ausf. M. mit 7.5cm PAK 40/3. Marder III

Crew: 4.

Weight: 10.5 tons.

When the selfpropelled carriage version of the 38 (t) chassis became available, it was decided not only to utilize it for carrying the 15cm. sIG 33 as had been planned, but in addition to mount the PAK 40 Anti-tank gun. This further increased the Antitank power of Infantry Divisions until such time as the Jagdpanzer 'Hetzer' was ready. Approximately 800 units were built by B.M.M. of Prague.

(Photo 6: STT 7225).

1943/44. Sd.Kfz. 138/1.

15cm sIG 33/1 auf Selbstfahrlafette 38 (t) (SF) Ausf. M.

Geschuetzwagen 38 fuer 15cm. sIG 33/1.

Crew: 4.

Weight: 12 tons.

By mid 1943 a design for a selfpropelled carriage, using the Pz.Kpfw

38 (t) components was ready. The engine was moved forward to the position formerly occupied by turret base, the driver sat in front thus leaving an adequate space to the rear for mounting weapons. A total of 370 15cm sIG were mounted on this and the earlier Ausf. H. chassis. (Photo 7: STT 7408).

1943/44. Sd.Kfz. 138.

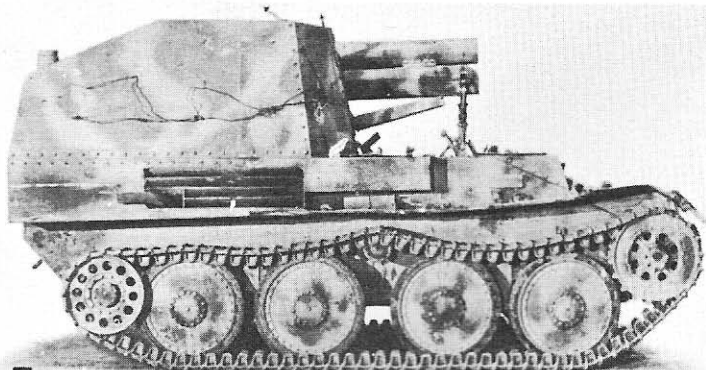
Munitionspanzer 38 (t).

Munitionspanzer auf Geschuetzwagen 38 (t).

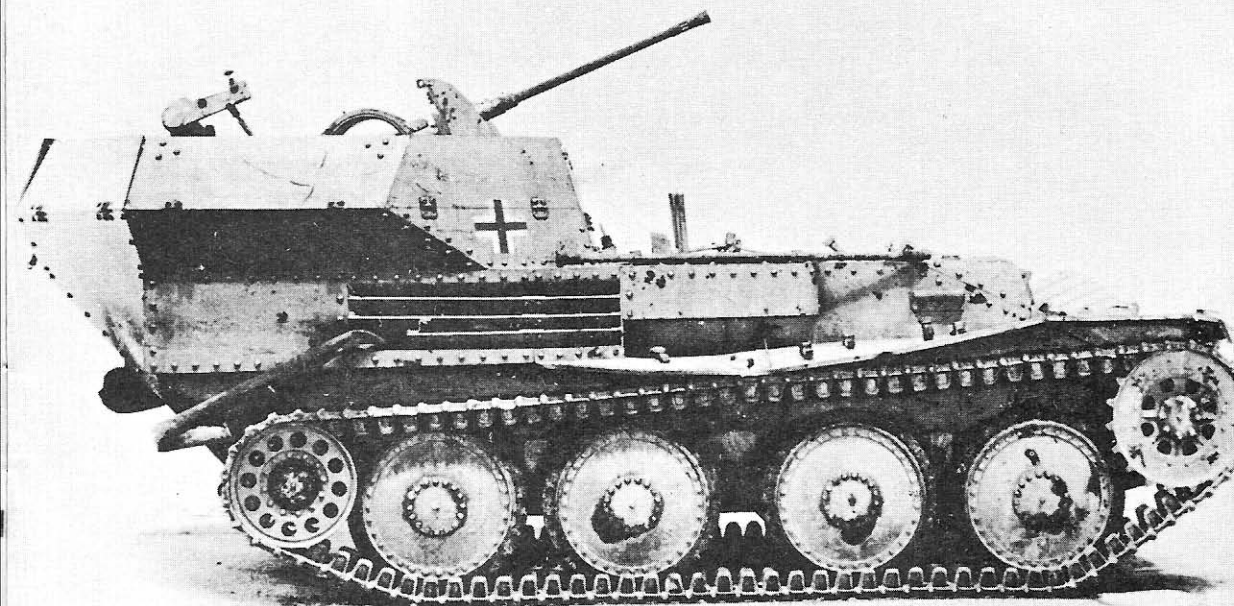
Crew: 3.

Weight: 9 tons.

Using the same chassis as the sIG 33, GW 38, this vehicle was issued as ammunition carriers. They could carry 40 rounds. In all 102 were built.



7



8

1943/44. Sd.Kfz. 140.  
Flakpanzer 38 (t) (2cm).  
Crew: 4.

Weight: 9.8 tons.

In addition to using the 38 (t) carriage for 7.5cm and 15cm a version was adapted to carry the 2cm FLAK 38.

The need for such a vehicle only became apparent during 1943 when the Soviet Air Force emerged as a powerful force. Minor modification of the basic carriage was necessary to give the required traverse for the FLAK 38. Only 162 were built as production of the chassis was taken up by the 'Hetzer'. They were replaced by the more powerful Flak-panzers on the Pz.Kpfw IV chassis, but plans were made to utilize the basic 'Hetzers' vehicle in a similar role.

(Photo 8: STT 7484).

1943  
Panzerkampfwagen 38 (t)

Crew: 3.

Weight: 8.5 tons.

Small numbers of the Pz.Kpfw 38 (t) were converted to training vehicles by having their turrets removed. To save petrol these were usually powered by gas generators.

(Photo 9).

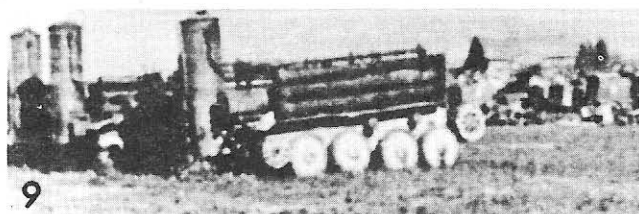
1942/43.

Munitionsfahrzeug auf Fahrfeststell Pz.Kpfw. 38 (t).

Crew: 3.

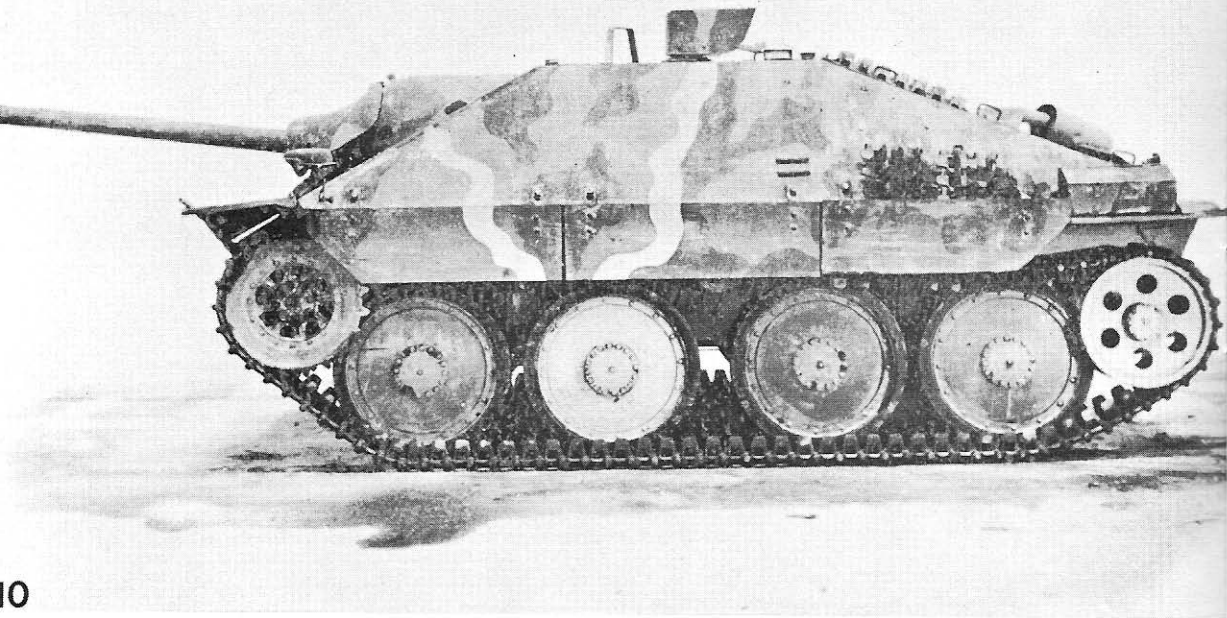
Weight: 8 tons.

Obsolete Pz.Kpfw 38 (t) with their turrets removed were utilized as armoured munition carriers and tow vehicles for breakdown gangs.



9





1944/45

#### Jagdpanzer 38 (t) 'Hetzer'

Crew: 4 Weight: 15.8 tons.

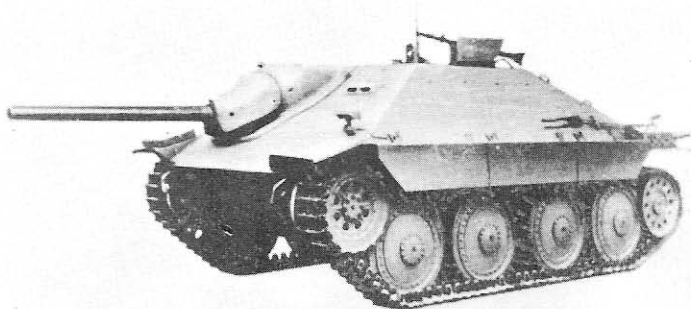
Selfpropelled weapons of the type described already suffered serious disadvantages with their light and incomplete armour, high silhouette and improvised design. However, the assault guns originally conceived as Infantry support vehicles proved that they could undertake Antitank work with maximum success. In March of 1943 light Jagdpanzer were called for and the 38 (t) chassis was proposed. The weapon selected was the 7.5cm PAK 39 a modified version of the 7.5cm KwK 40 L/48 used in the Pz. Kpfw.IV. First units were not in service until May of 1944. All available 38 (t) production was diverted to them as they soon showed themselves to be an excellent weapon. By 1945, when the factories in Czechoslovakia were overrun, 1577 had been manufactured. (for full details see Bellona Prints, Series 4). (Photo 10: MH 7786. Photo 11: MH 8920)

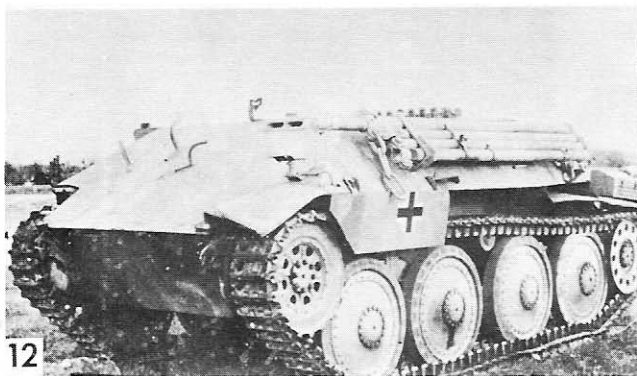
1944/45

#### Flammenwerferpanzer 38 (t) - 'Hetzer'

Crew: 4 Weight: 15.5 tons.

Some of the production of the 'Hetzer' was diverted so that they could be fitted with a Flame projector in place of the 7.5 cm PAK 39.





12

1944/45

Bergepanzer 38 (t) - 'Hetzer'

Crew: 4 Weight: 14.5 tons

These vehicles were also diverted from the 'Hetzer' production lines and differed only by having no 7.5 cm PAK and being fitted with a winch. They were issued to Infantry units operating the Hetzers. (Photo 12: MH 9088)



13

1945.

8.8cm PAK 43/3 auf Panzerjaeger 38 (t).

Crew: 4.

Weight: 15 tons.

Original prototype for series of Panzerjaegers. New Tatra 12 cylinder Air cooled engine of 210 bhp. (Photo 13).

1945.

8.8cm Panzerjaegerkanone 43 auf Sfl.38 (d).

Crew: 4.

Weight: 15.5. tons.

Rheinmetall-Borsig/Ardelt prototype for 38 (d).

Waffentraeger series. All round traverse and open topped turret. (The vehicle in the foreground is a Funklenpanzer B IV Ausf C Sd.Kfz. 301 demolition vehicle).

(Photo 14: BU11841).

1945.

8.8cm Pjk 43/3 auf Krupp/Steyr Sfl. 38 (d).

Crew: 4.

Weight: 15.5 tons.

Based upon the Pz.Kpfw. 38 design but with the suspension system similar to the Raupenschlepper Ost. This was the prototype of standard Waffentraeger supposed to carry a very wide variety of heavy weapons. (Photo 15: MH 9771).

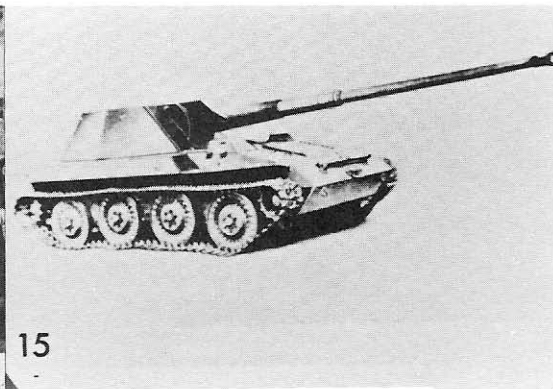
1945.

Outstanding projects utilizing the 38 (t) components were the Kleiner Kugelblitz 38 (d) similar to the Kugelblitz described in Part 1. Prototype was not finished before the cessation of hostilities.

Schuetzenpanzerwagen auf 38 (t); Plans were laid for a fully tracked troop carrier using an elongated 38 (t) chassis. The war ended before production commenced.



14



15



# France

On the 10th of May 1940 German Divisions struck west into France. On the 25th of June hostilities ceased and the German army had destroyed the French Army, British Expeditionary Force, and the Armies of the Benelux countries. At the outbreak of fighting the French Army was one of the most powerful in the World. Its armoured units were equipped with about 3,500 tanks of which a good proportion were units built since 1935 – 800 were either new mediums or new heavies.

While large numbers were destroyed in the conflict, the German advance was so speedy that consignments of new tanks were captured on their way to the front. Therefore considerable numbers of serviceable armoured vehicles fell into German hands. These were examined and with few exceptions, the recommendations were that they were not of sufficient standard to serve a useful part of German units. Not that the French tanks were that poor – most had better armour and bigger guns than their German counterparts, however the overall designs usually left little room for improvement and above all they all were fitted with a one man turret. This one man turret meant that the Commander was also the gunner and loader – thus seriously reducing the potential fighting power. French equipment was therefore stockpiled.

The coming invasion of Russia led to the release of about 200 light Renault tanks which were designated 'Pz.Kpfw R 35 (4.7cm)' these were issued to reconnaissance units from July 1941. Next to be used were turretless medium light tanks of the 35 R, 35 H to 39 H type. These units were issued as ammunition carriers and tractors because of the problems caused by weather conditions which stopped wheeled transport getting to the front.

The only French vehicle to be accepted as standard equipment in the Wehrmacht list was the 'Tracteur Blinde 38 L'. The 'Lorraine Schlepper' as it was known by the Germans, was lightly armoured ammunition and personnel carrier which had appeared in 1938. Initially

it was utilised in its original role as an ammunition carrier. But with its driving compartment forward, engine amidships, and open tray to the rear it represented an ideal selfpropelled carriage on which a gun could be mounted with the minimum of trouble and specialised machinery. Contracts were placed with the inexperienced engineering works of Alfred Becker of Krefeld in early 1942. This firm was subsequently made responsible for most of the conversion of French vehicles to gun carriages. The 'Lorraine Schlepper' was allocated the special motor vehicle number Sd.Kfz. 135.

The old tanks such as the Renault FT 1917 were gradually handed over to internal security forces in the occupied countries. Wholesale use of French tanks began in earnest after the collapse of Stalingrad. So much material was lost that several Panzer Divisions had to be reconstructed with French tanks as their main equipment. These were mainly the excellent Somua 35 and heavy Char B I Bis. Later models of the Hotchkiss H 35 to H 39 series were improved by fitting radios, and were pressed into service also. The remainder of this series went to equip Panzer training schools which could not be supplied with new German tanks.

When Field Marshall Rommel was given the task of improving the defence of France against the expected Allied Invasion, he was appalled to discover the dreadful state of things existing. Not only was the famed West Wall defences non-existent in all but a few areas, there was very little mobile equipment available to the defenders with which to counter attack. Knowing that no supplies of German armoured vehicles could be obtained, Rommel secured the release of further French equipment. Quite a substantial number of French tanks were converted to Selfpropelled guns, however, it was a very mixed selection of chassis that were ultimately used. Many of the turrets of these vehicles were used on defences where they were mounted in concrete and became strong points. Most of the vehicles converted remained to serve in France in 1944.

1941

Munition Transport Kraftwagen auf 'Lorraine Schlepper' (f)

Crew: 2 Weight: 6 tons

Unmodified 'Tracteur Blinde 38 L' used by German Army.

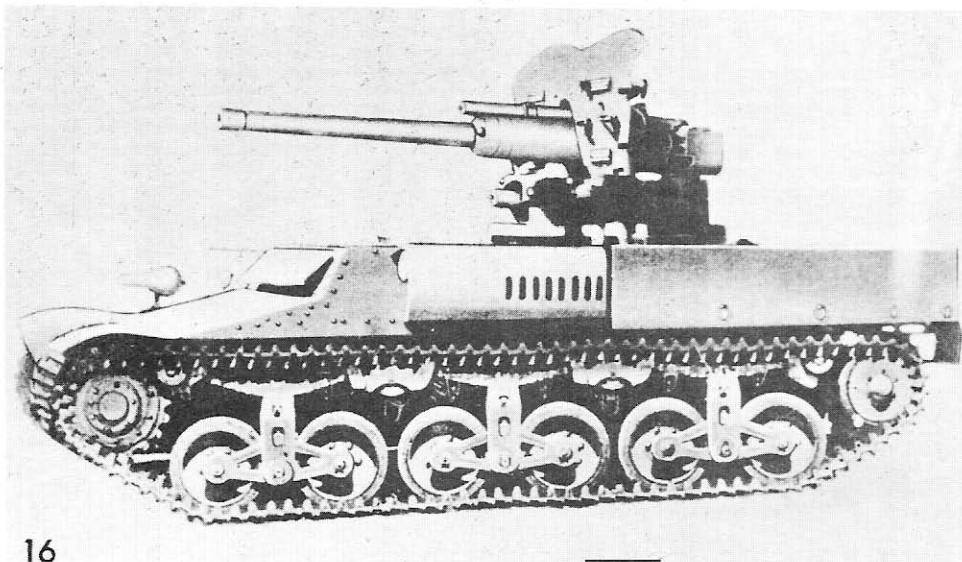
1941

4.7 cm PAK 181 oder 183 (f) auf Pz. Jaeg 'Lorraine Schlepper' (f)

Crew: 3 Weight: 6 tons

Simple conversion produced in very small numbers. Either the French 47 mm M/E 1937 or M/E 1939 antitank gun mounted on a pedestal on the unmodified Lorraine carriage.

(PHOTO 16: MH 7811)





1942/43  
Sd.Kfz.135/1.  
15cm. sFH 13/1 auf Gw. 'Lorraine Schlepper' (f).  
Crew: 4.  
Weight: 8.36 tons.  
Early in 1942 the firm of Alfred Becker of Krefeld was entrusted with the conversion of the Lorraine tractor chassis to carry a Howitzer. The weapon was an obsolete Krupp weapon from the 1917 period – but

utilization of this equipment and the French chassis allowed the quick production of this vehicle without impairing existing production. Geschuetzwagen Lorraine served on all fronts, commencing in Africa. Improved versions as shown in photo 17 were still in service 1944 in France.

(For full details see Bellona Prints Series 10).  
(Photo 17: and Photo 18: E 17034).





1943  
10.5cm leFH 18 auf Gw. 'Lorraine Schlepper.' (f).  
Crew: 4.

Weight: 8.5 tons.

In addition to the 102 vehicles converted to carry the 15cm sFH a further 24 were then modified for the 10.5cm leFH 18 – standard Field Howitzer. These included all the latest features introduced on the earlier vehicles. Most of these guns appear to have served in Russia. (Photo 19: STT 3439).

1944.  
12.2cm FK (r) auf G. W. 'Lorraine Schlepper' (f).  
Crew: 4.  
Weight: 9 tons.

This vehicle used on the Russian front had its 10.5cm le FH 18 replaced by a Russian Howitzer.

1942/43. Sd.Kfz.135.

7.5cm PAK 40/1 auf Gw. 'Lorraine Schlepper' (f).  
Panzerjaeger fuer 7.5cm PAK 40/1 (SF) 'Lorraine Schlepper' (f).  
'Marder I'.

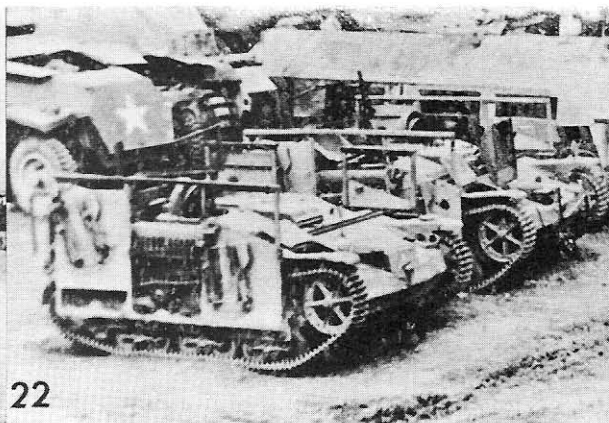
Crew: 4.

Weight: 8 tons.

184 PAK 40 antitank guns were mounted on the Lorraine chassis by Alfred Becker of Krefeld. These vehicles were very like similar equipment developed on the Pz.Kpfw II and Pz.Kpfw 38 (t) chassis. Again the production capacity of Beckers was utilized with available chassis. Most of these vehicles were retained by Divisions serving in France which were by mid 1943 awaiting an Allied invasion. (Photo 20: Warpics and Photo 23, page 11).







1941.  
3.7cm PAK 35/36 auf Infanterie Schlepper UE (f).  
Crew: 3/4.  
Weight: 2 tons.

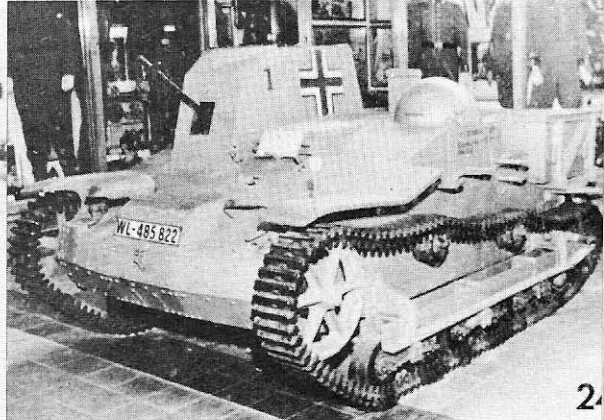
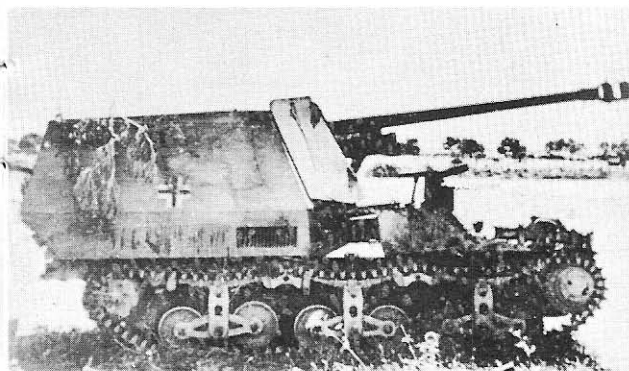
Large numbers of the French Infantry Carrier UE became available after the collapse of France in 1940. The chassis of these carriers were too small for mounting anything but the 3.7cm PAK 35/36. While this self-propelled gun has nothing more to offer than an order of mobility – this justified the use of these readily available chassis. Not very many were converted – they were mainly stationed in France, more as an aid to Garrisons rather than as a defensive weapon. There were several different versions, some were more fully armoured and even had overhead protection.  
(Photo 21: MH 7813).

1943/44.  
Infanterie Schlepper UE (f) fuer 28cm Wurfrahmen.  
Crew: 2/3.  
Weight: 1.75 tons.

When Field Marshal Rommel was made responsible for the defence of France in 1943, he was appalled by the inadequacy of the fortifications and of the equipment of Armoured units supposed to throw any invaders back into the sea. Rommel obtained the release of vast amounts of obsolete French equipment and had it modified to assist in any way possible. Mounting of racks for launching 28cm High Explosive or Petroleum Rockets on the sides of the UE served as a useful addition to Artillery units.  
(Photo 22).

1941/44.  
7.92mm MG 34 auf Infanterie Schlepper UE (f).  
Crew: 2/3.  
Weight: 1.5/2 tons.

As the UE chassis was not in much demand by the Whermacht it was made available to both the Luftwaffe and Security forces for defence of Airfields and policing duties. Therefore a large number of different versions mounting the MG 34 were produced. The photo 25 shows one that was used in Denmark while the example in photo 24 apparently saw service in Belgium.  
(Photo 24 and 25).





1943/44.  
Infanterie Schlepper UE (630) (f).  
The UE was put to many other miscellaneous tasks. As the top right photo shows it was used as the basis for dummy tanks in a Panzer Training School. The vehicle simulated is the Russian T-34 (Photo 26). Other duties for which the UE was used, were its original purpose of a Munitions carrier. As a snowplough and finally the non-military task of an agricultural tractor.  
(Photo 26)

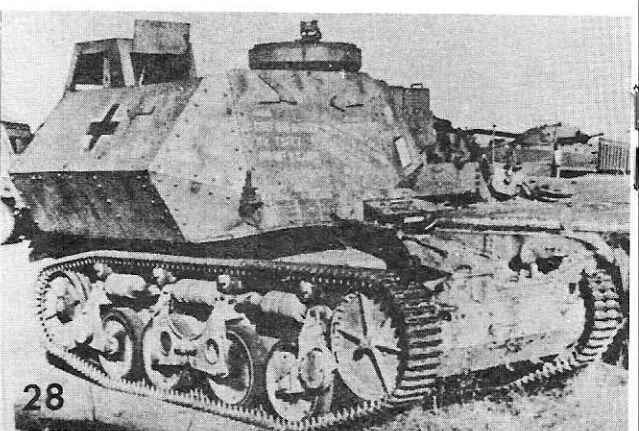


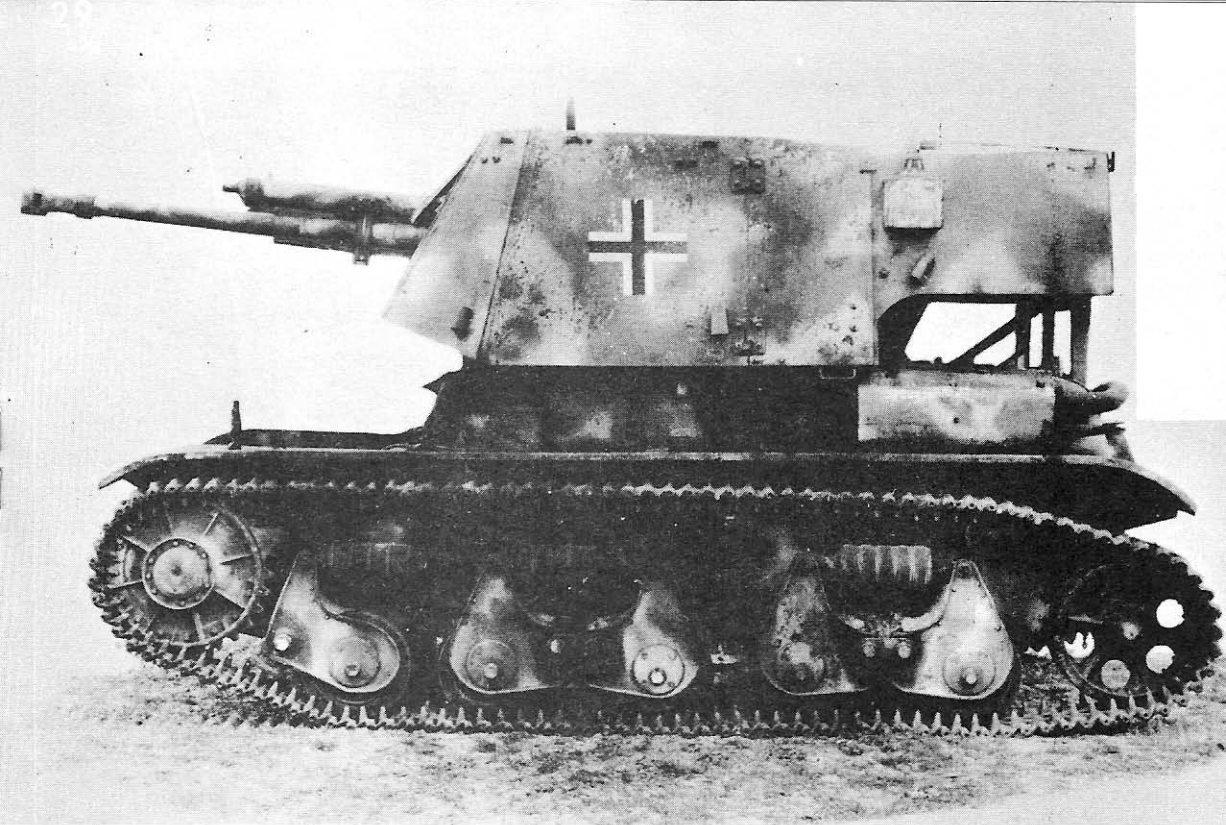
1943/44.  
Panzerspahwagen AMR (f) (2cm).  
Crew: 2.  
Weight: 2.25 tons.  
Turretless French reconnaissance vehicle. Only modification carried out by the Germans was the substitution of a 2cm KwK 30 or 38 for the French 2.5cm Gun formerly used.

1943/44.  
Moersertraeger AMR (f).  
8cm Schwerer Granatwfer 34 auf Pz.Sp.wg. AMR (f).  
Crew: 3/4.  
Weight: 3 tons.

The weapon carried in this converted AMR tank was an 8cm Trench mortar complete with a large quantity of Ammunition. This gave mortar

sections, not equipped with semitrack mortar carriers, equivalent mobility. As with most converted French equipment these vehicles mainly saw service in France and surrounding areas. Two distinct versions appeared: the first was fitted with the usual type of superstructure (Photo 27). The latter had the added refinement of a special pulpit type of cupola for an MG 34 or MG 42.  
(Photo 28).





1943.

4.7cm PAK (t) auf Pz.Kpfw 35 R (f).

4.7cm PAK (t) auf Panzerjaeger Renault R 35 (f).

Crew: 3/4.

Weight: 10.5 tons.

Another vehicle designed specifically for the defence of France. This time existing stocks of the hard hitting but obsolete Czechoslovakian Antitank gun were obtained. (These had already been used on the Pz. Jaeger I-Sd.Kfz.101 described in Part 1). The cast hulls of these small French tanks made them difficult to adapt for mounting large weapons. This was overcome by replacing the turret by a new large fixed turret. It is not known just how many vehicles were converted but it would appear to have been about 100.

(Photo 29: photo 30: Warpics).

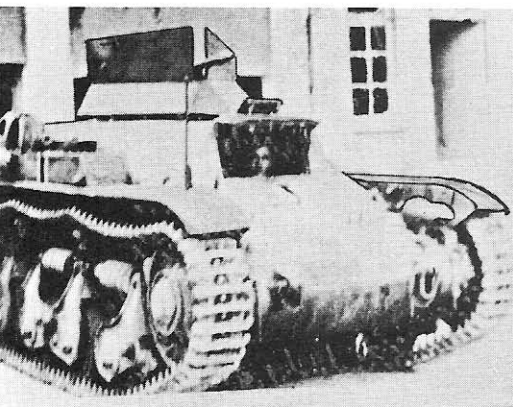
1943.

4.7cm PAK 181 oder 183 (f) auf Pz.Kpfw. 35 R (f).

As above, but equipped with the French 4.7cm Antitank gun. Very limited numbers – probably used for training purposes.







1942/43.  
Munitonpanzer 35 R (f).  
Crew: 2.  
Weight: 8 tons.  
Turretless Renault R 35 tank used as ammunition carrier.



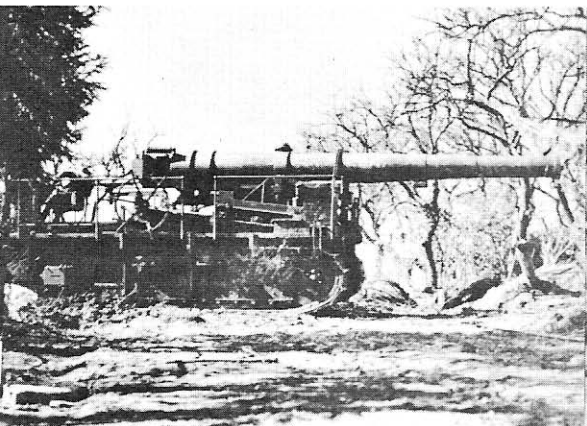
1942/43.  
Tractor 35 R (f).  
Crew: 2/3.  
Weight: 8 tons.  
Turret removed and opening covered with split hatches. Numbers of these vehicles were used to assist supply columns in Russia when the going was rough. Also used to tow large supply trailers. (Photo 32).

1942/43.  
Panzerkampfwagen 35 R (f) (MG 34).  
Crew: 3.  
Weight: 8 tons.  
Turretless Renault R 35 modified for mounting of 7.92mm MG 34 armament, may be tractor or Munitonpanzer. (Photo 31).

1943.  
Moersertraeger 35 R (f).  
Crew: 4.  
Weight: 8.5 tons.  
Turretless vehicle mounting a 8cm Mortar-improvisation.

19.4cm s.Moerser auf Sfl. Schneider (485) (f) (Canon De 194mm GPF. sur Chenilles).  
Unmodified French Heavy Howitzer on tracked carriage. Two versions of this vehicle existed, the earlier one was towed by a tractor of similar appearance to the carriage of the Howitzer. The example shown is a selfpropelled version. (Photo 33: photo E. C. Armee).

1944.  
Pouche de la Rochelle. 7.5cm PAK 40 (SF).  
Crew 5/6.  
Weight:  
A field improvisation on one of the tractors of the 194mm GPF mentioned above. (Photo 34).



34



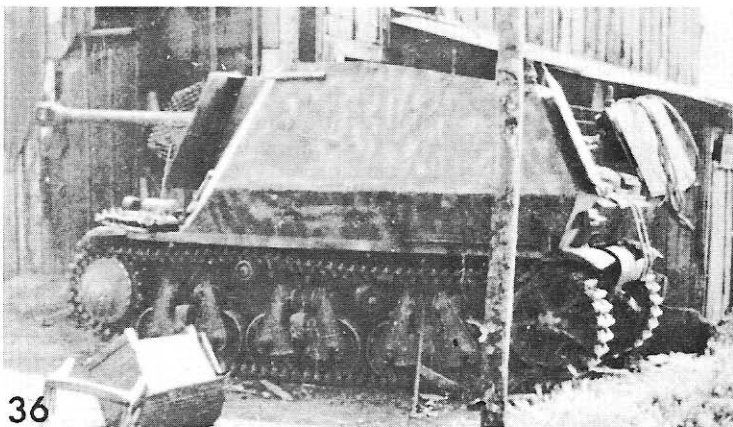
1943/44.  
7.5cm PAK 40 auf Gw. 39 H (f).  
Crew: 4/5.

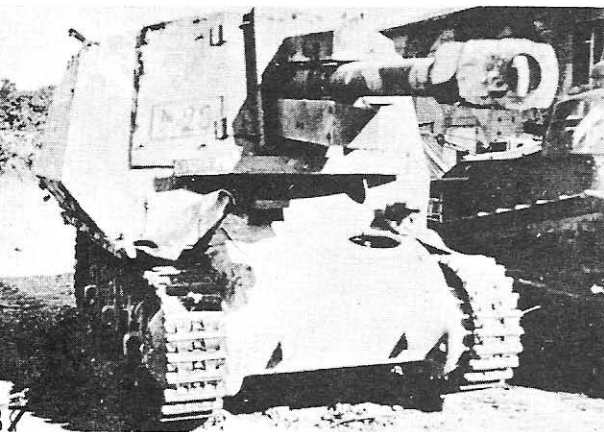
Weight: 12.5 tons.

Seventy-two Hotchkiss H 39 tanks were sent to the Alfred Becker works in Krefeld, for adaptation to Selfpropelled gun carriages during 1943 and early 1944. PAK 40 Antitank guns were mounted in only 24

according to the records available, the remaining chassis were used as mounts for the 10.5cm le FH 18 Howitzer. A platform was extended out over the drivers plate and on this was mounted the weapon. Because of this configuration the vehicle was excessively high. As with most similar conversions of French vehicles these guns were returned to troops in France.

(Photo 35: MH 390. Photo 36: MH 6012).





1943/44  
10.5 cm leFH 18 auf GW 39 H (f)  
10.5 cm Panzerfeldhaubitze 18 auf Sfl. 39 H (f)  
Crew: 4/5  
Weight: 13 tons.

Eight Batteries were set up with the 48 guns built on the Hotchkiss chassis. Once again these served mainly in France. Superstructure was identical to that of the version armed with the 7.5 cm PAK 40.

(Photo 37: Photo E. C. Armee)



38

1941/42  
Munitionschlepper Hotchkiss (f)  
Traktor 39 H (f)  
Crew: 2.  
Weight: 11 tons.

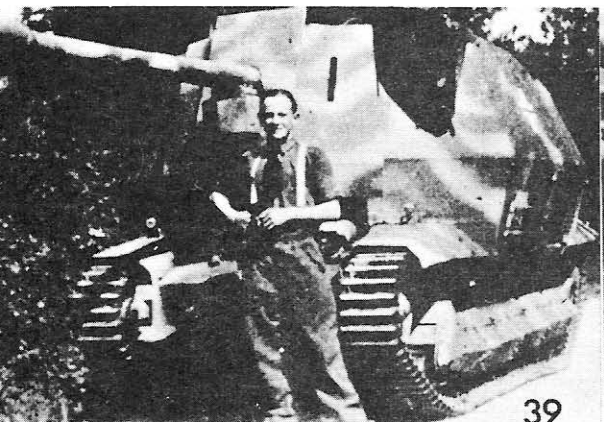
Turretless Hotchkiss H 35, 38, 39/40 were pressed into service as munition vehicles and tractors during the early months of the invasion of Russia. Later quite a number of these vehicles were fitted with the turret of the German Sd.Kfz 221 armoured car.

(Photo 38)

1943  
7.5 cm PAK 40 auf GW. FCM (f)  
Crew: 4/5.  
Weight: 13.5 tons.

The FCM 36 tank was not as suitable as the Hotchkiss, and Renault tanks for adapting as a gun carriage. This version is a very rare type as records show only 10 thus modified.

(Photo 39: MH 6004)

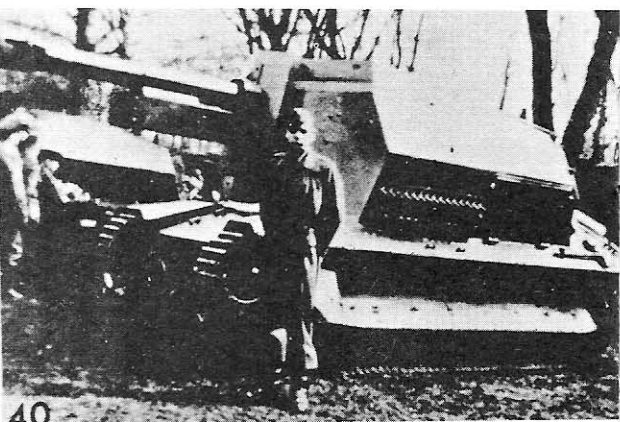


39

1943  
10.5 cm leFH auf GW FCM (f)  
Crew: 4/5.  
Weight: 13.5 tons.

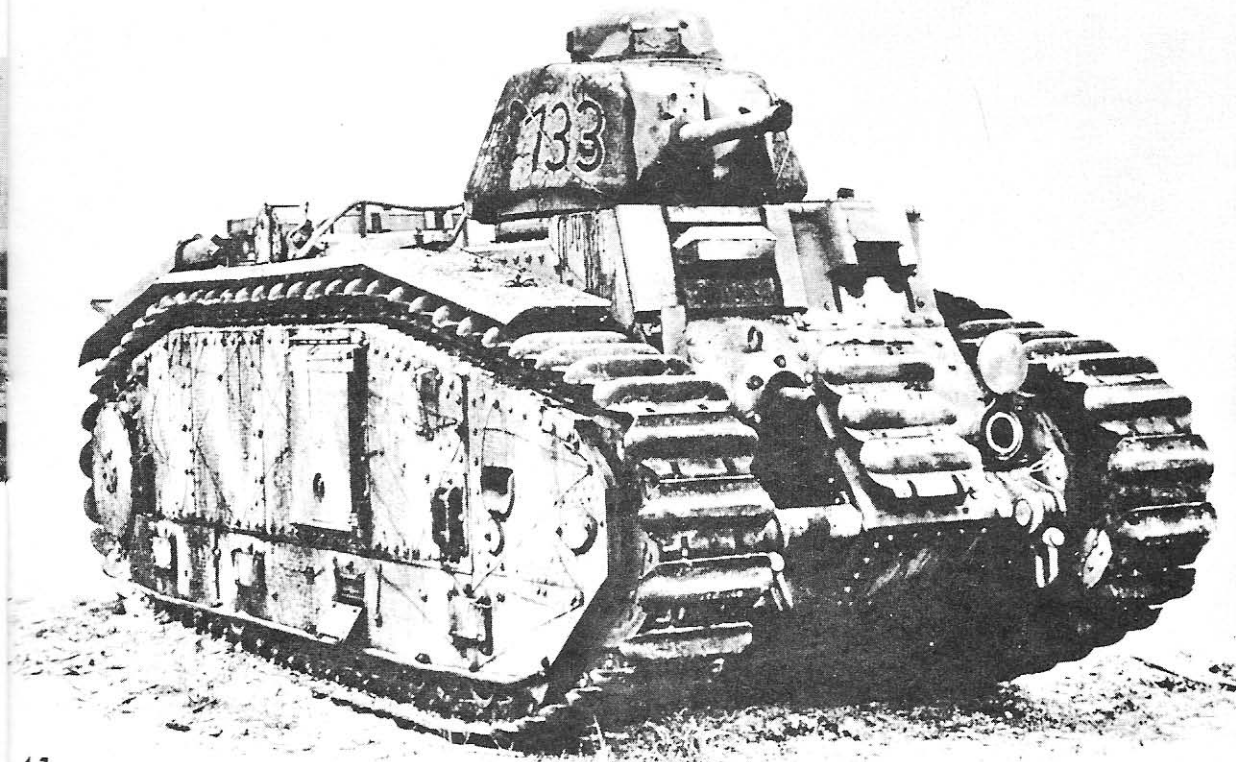
24 FCM chassis were converted in addition to the 10 used for the PAK 40. All work was carried out by Alfred Becker. The Howitzer in this case was the old 10.5 cm leFH 16 L/22 fitted with a Muzzlebrake to reduce recoil.

(Photo 40: MH 6003)



40



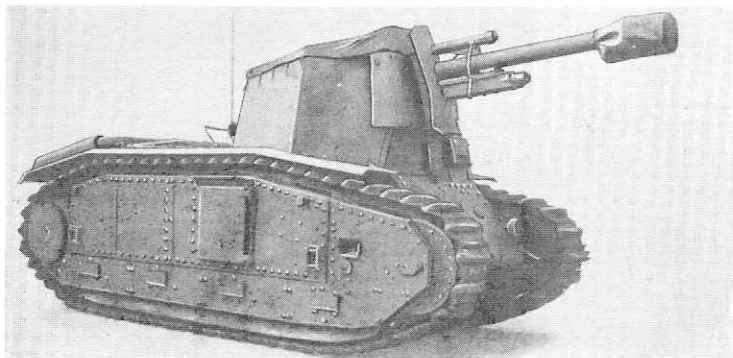


41

1942  
Panzerkampfwagen B1 oder B2 (f) fuer Fahrschulwagen.  
Crew: 2/3.  
Weight: 30 tons.  
Turretless Char B tanks were used for primary driver training in many Panzer schools. Some of these had the aperture for the 7.5 cm Hull blanked off, but many had a standard German Machine gun mounting in its place.

1943/44  
10.5 cm leFH 18/auf GW. B2 (f)  
Crew: 5.  
Weight: 32.5 tons.  
Standard 10.5cm leFH 18/3 mounted in a new fixed turret on the Char B2. A very limited number of these vehicles were converted by Rheinmetall Borsig.  
(Photo 42 Armins Sohns collection).

1943  
Pz.Kpfw B1 Bis (f) Flamm.  
Crew: 4.  
Weight: 34 tons.  
A flame thrower replaced the hull 7.5 cm gun on this vehicle. The tank for the flame fuel was built onto the rear of the hull. 24 were thus modified and at least two served with the Garrison on Guernsey.  
(Photo 41)



# Italy

After the Italian Armistice in 1943 the German Army was glad to get possession of the large numbers of Armoured vehicles available and these were soon pressed into service with units fighting in Italy and later those operating in Southern France.

The main type of vehicle used was the Assault Gun built on the chassis of the Medium tank. The design of the tank dated back to 1938, but due to production delays, the final version, the M 13/40 did not appear until 1940. At this time it was comparable to most tanks of other nations. However, the main combatants had already learnt much from the early tank battles, and were planning new designs or improvements. During the African Campaign the German Pz.Kpfw III proved a much superior vehicle and negotiations were initiated for licence to produce this vehicle in Italy. Again delays hampered this project and later proposals to manufacture heavier German tanks, and eventually the suggestion was abandoned. These developments forced the Italian High Command to renew orders for the later models of the M 13/40, the M14/41 and M15/42.

Success of the German Sturmgeschuetz in the Battle of France prompted similar developments in Italy. The first Italian Assault gun the Semovente 75/18 appeared in 1941, the low outline and heavy armour made this a much superior vehicle to the tanks on which it was based. During the period of indecision on tank production, ever increasing numbers of the Semovente 75/18 were ordered in preference to the battle tanks. Late in 1942 the first long barrelled gun was fitted and due to the improvement thus achieved all tank production was abandoned in favour of this new weapon in early 1943.

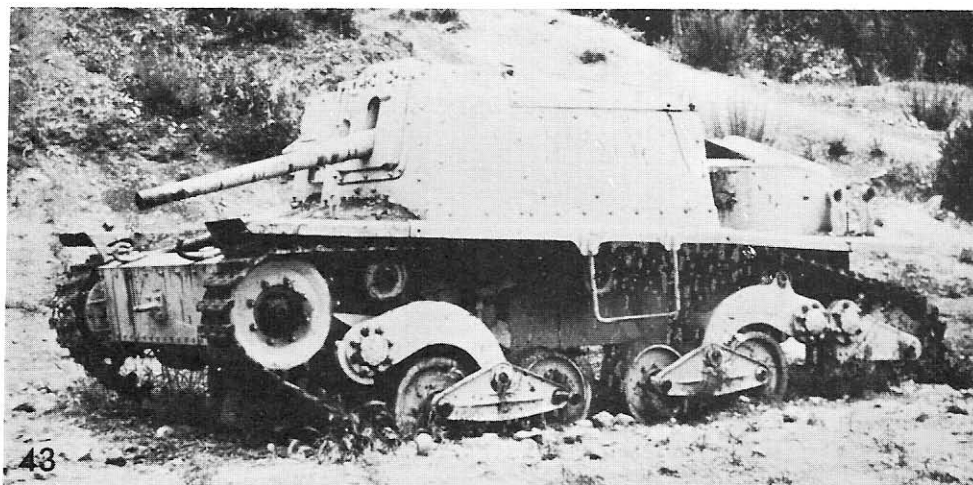
1941.  
Panzer Befehlswagen 47/32 (770) (i).  
(Carro Comando Compagnia Semoventi DA 47/32).  
Crew: 2.  
Weight: 6.6 tons.  
This vehicle was the first Semovente built by the Italians. The gun was their hard hitting 47mm Antitank gun and the chassis was that of the Light tank L.6/40. These vehicles saw service with the Italian forces in Africa, and may on occasion have been utilized by the D.A.K. However, it was not until after the Italian capitulation that such equipment was used in quantity by the German Army.  
(Photo 43).

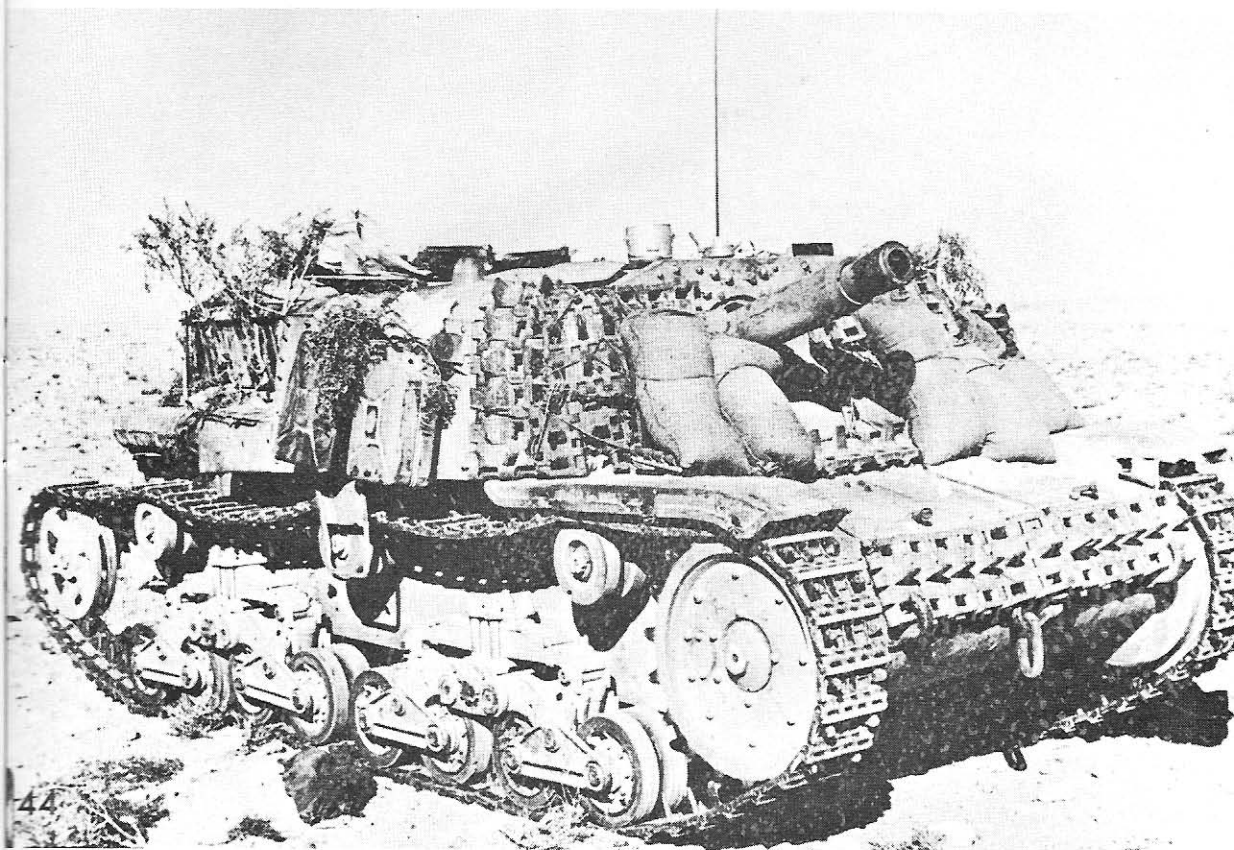
During 1943, further improvements were effected when the long barrelled 75/46 antitank gun replaced the 75mm L/34 Gun. About the same time a 105mm Howitzer was also fitted so that some Semoventes could co-operate with Infantry units. No major fighting was undertaken by Italian Armoured units after Sicily in mid 1943, so from 1943, nearly all the vehicles produced remained in Italy. The signing of the Armistice with Italy in September 1943 was announced somewhat prematurely by the Allies and this allowed the German take-over of Northern Italy. Along with this take-over went all the materials of the Italian Army. The main supply of the Armoured vehicles were in excellent condition. Semovente 75/18 had from time to time been used by German Forces in Libya and Tunisia so their value was realised and they were immediately supplied to the under equipped Panzer Grenadier Regiments which had been hurried into Italy at the first sign of Italy's defection from the Axis camp.

So prominent were these Italian vehicles in the fighting from late 1943 to mid 1944, that the Semovente is seldom photographed in other than German Markings. Selfpropelled carriage development was more limited but particularly the 90/53 proved an effective weapon. Italian equipment, while not quite up to the standard of contemporary German vehicles, was a very useful addition to German strength in Italy. Furthermore conditions in this theatre were such that the slightly out of date equipment did not show as much disadvantage as it would have done in open combat conditions.

1942.  
Pz. Bef. Wg. M 41 (771) (i)  
(Carro Comando Semoventi M 41).  
Crew: 3/4.  
Weight: 12.7 tons.  
Command vehicles based on the chassis of the M 13/40 and 14/41 tanks. Conversion consisted of removal of turret and covering over opening. Armament consisted of 13mm MG and a 8mm Breda AA. MG.

1943.  
Pz. Bef. Wg. M 42 (772) (i).  
Crew: 3/4.  
Weight: 13.3 tons.  
As above, but chassis of 15/42 tank.  
(For full detail see Bellona Prints Series 33).





1941.  
Sturmgeschütz M 40 und M 41 mit 75/18 (850) (i).  
(Semoventi M 40 e M 41 – DA 75/18).  
Crew: 3.  
Weight: 13/13.7 tons.

The success of the German Sturmgeschütz on the Pz.Kpfw III chassis prompted similar development of the Italian standard battle tank the M 13/40 and later the M 14/41. While the tank was only a limited

success the Da 75/18 proved an excellent weapon. Frontal armour was 50mm giving it a vastly better protection than most Italian Armoured vehicles. It was cheap and easier to manufacture than the tank. Relatively small numbers saw service in Africa, but their impact was significant with the result that increasingly large numbers of tank chassis were diverted to Semovente production.

(Photo 44: E 19171. Photo 45: NA 22006).







1942/43  
Sturmgeschütz M 42 und M 43 mit 75/34 (851) (i)  
(Semoventi M 42 e M 43 – DA 75/34)

Crew: 3.

Weight: 14.5 tons.

A further model of the earlier Semoventi with the new long barreled dual purpose 75 mm gun, and other minor improvements to superstructure. The chassis was that of the final model of the M 13 tank – M 15/42 which had a more powerful engine and thicker basic armour. These guns were used in very large numbers by the German Army units in Italy during 1943 and 1944.

(Photo 46)

1942

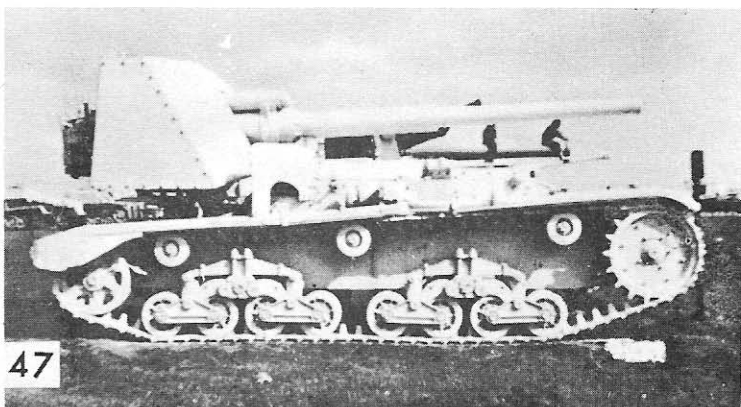
Gepanzerte Selbstfahrlafette fuer 90/53 (801) (i)  
(Semoventi DA 90/53)

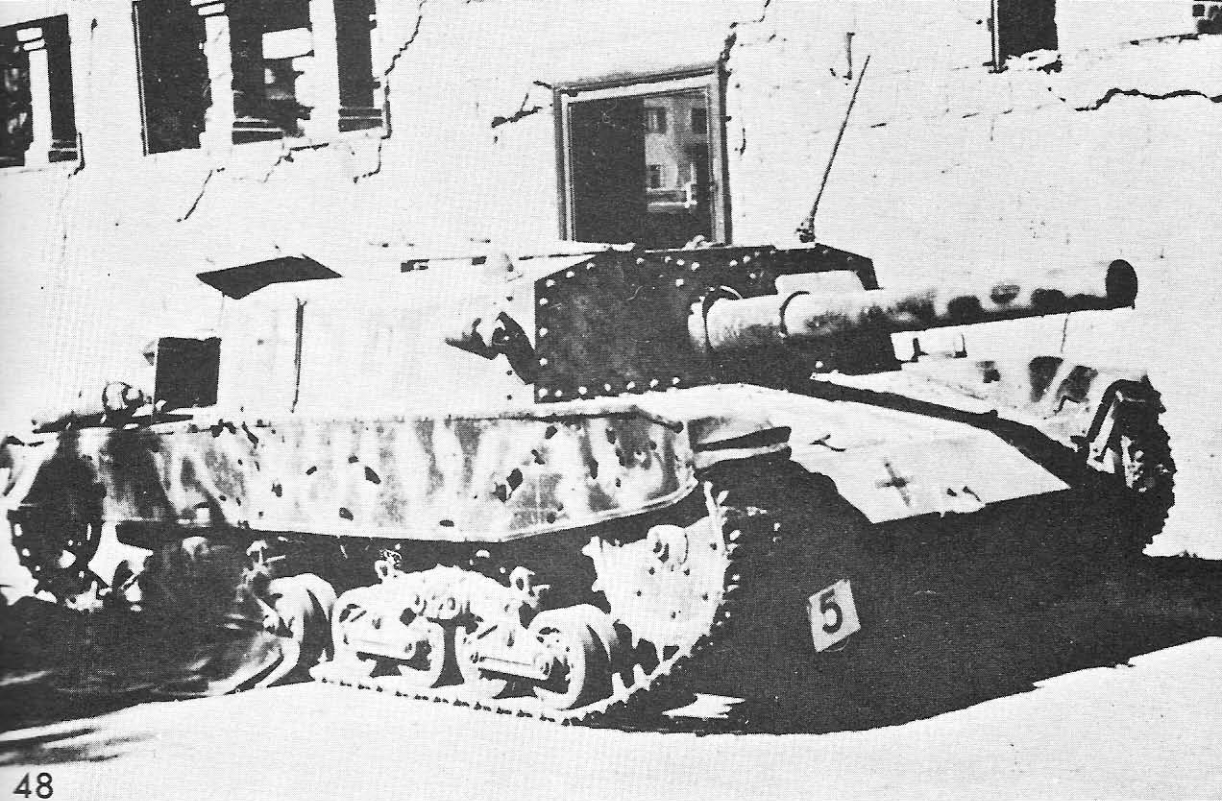
Crew: 4.

Weight: 15.3 tons.

The chassis of the M 14/41 tank was used for the basis of this self-propelled carriage for the Italian 90 mm dual purpose Antiaircraft and Antitank gun which itself was based on the successful 8.8 cm FLAK. They first saw service in Lybia during late 1942 and in Tunisia in 1943.

(Photo 47: Warpics)





1943  
Sturmgeschütz M 43 mit 75/46 (852) (i)  
(Semoventi M 43 – DA 75/46)

Crew: 3.

Weight: 15 tons.

Major improvement to this vehicle was the fitting of the 75 mm Antitank gun of 46 calibre length which was based on the German 7.5cm PAK 40. Not many of these vehicles saw service.

1943  
Sturmgeschütz M 43 mit 105/25 (853) (i)  
(Semoventi M 43 – DA 105/25)

Crew: 3.

Weight: 16 tons.

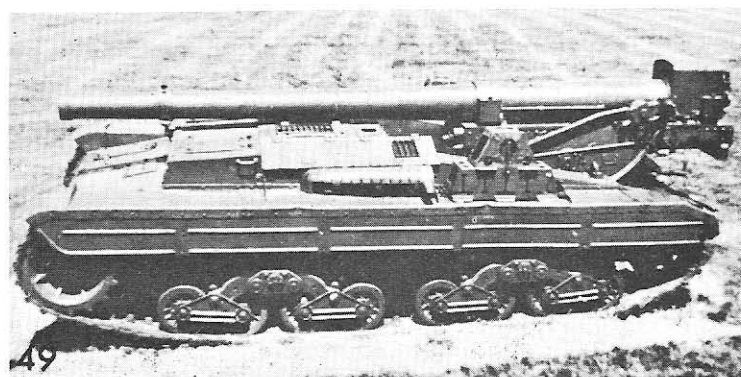
The M 43 Semoventi with a 105 mm Howitzer for cooperation with infantry. These were produced in larger numbers than the DA 75/46 and saw extensive service with German Panzer Grenadier units. (Photo: 48).

1943  
Gepanzerte Selbstfahrlafette M 43 fuer 15/42 (854) (i)  
(Semoventi DA 149/42)

Crew: 2.

Weight: 23.5 tons.

Selfpropelled carriage for the 149 mm Howitzer Model 1935. The gun crew travelled in a separate vehicle. The chassis was that of the M 15/42 (Photo 49: Warpics)



# Russia

A very great number of Russian Tanks and armoured vehicles were captured by the German Army during the drive into Russia in 1941. Very little of this equipment was of any value, being old and obsolete by contemporary standards. Thus the majority of the vehicles salvaged were for the steel. The only notable exception used in small numbers were the fully tracked Artillery tractors – due to the extreme terrain these were pressed into service to assist in the supply of units away from the main roads.

During the final months of 1941 the first T 34 and KV I tanks appeared on the battlefields. The introduction of these advanced vehicles rendered all existing German Tanks and Antitank guns obsolete. Their appearance in ever increasing numbers led in no small way to the hurried introduction of many selfpropelled guns of the Panzerjaeger type, based on old and foreign tank chassis. Of course, any servicable vehicle of this type captured were immediately put to good use.

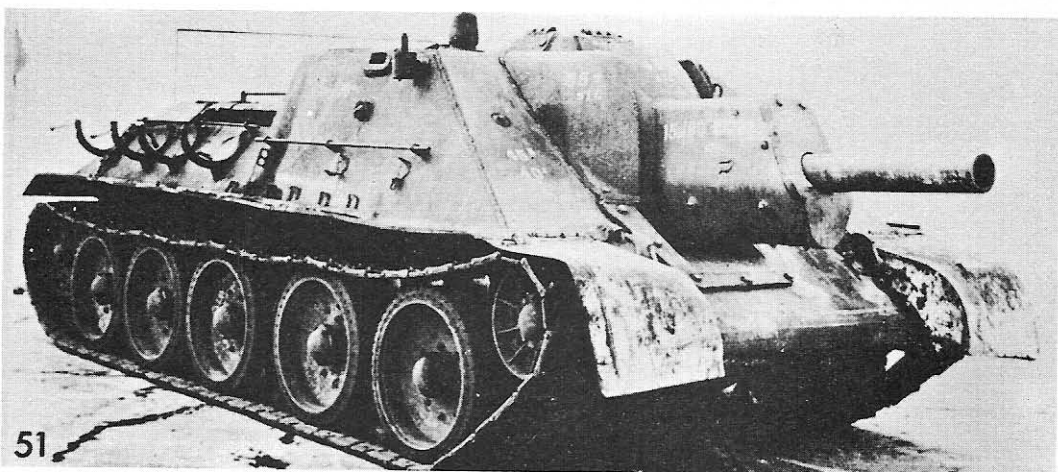
The heavy assault version of the KV tank was designated the Kliment Voroshilov II (Kliment Voroshilov II was the German spelling, hence their nomenclature KW II). This vehicle armed with a 152 mm Howitzer mounted in a huge turret, was captured in some quantity in servicable condition. This was possibly due to its unsuccessful combat performance and cumbersome bulk. This vehicle was classified as a Selfpropelled gun by the Germans.

When the Germans finally went on the defensive after the Kursk offensive in 1943 the pattern of fighting became very confused and in the following two years, units from both Armies were often cut off and forced to abandon vehicles due to lack of supplies. This meant that quite substantial numbers of vehicles changed hands and served with the opposing forces. Amongst the Russian ones captured by the Germans were the new SU 85 and other vehicles of similar type.

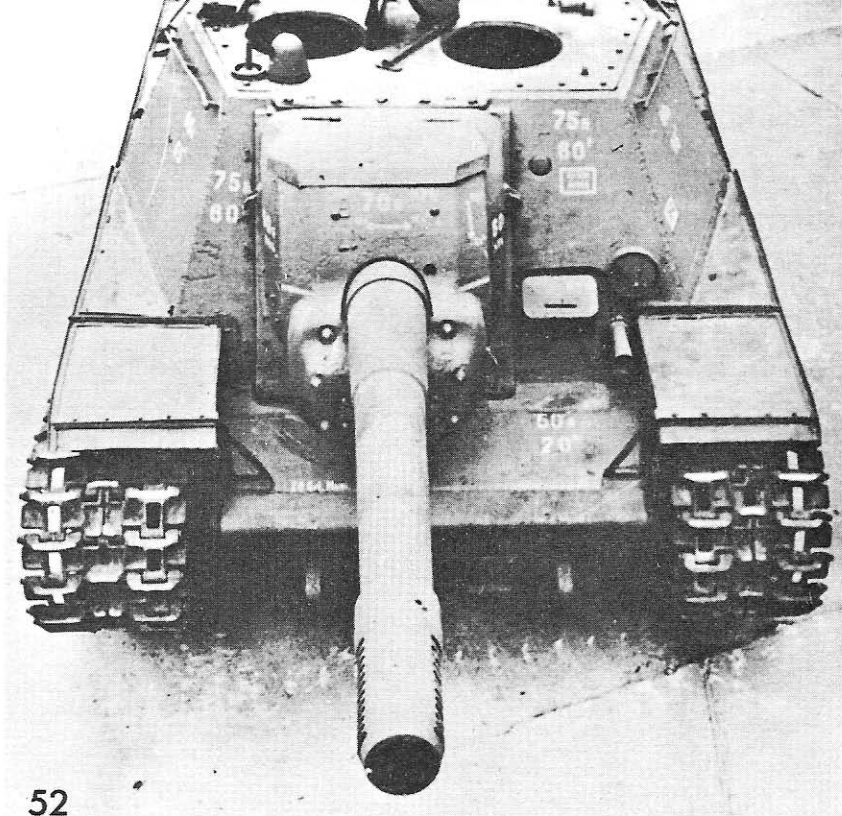
The SU 85 appeared in 1944 and comprised the successful 85 mm Antitank gun mounted in the chassis of a T 34 tank. The reason for the production of such a vehicle can be traced to the very successful employment of specialised Tank destroyed by the Germans. Thus the SU 85 was a cheap and easy vehicle to produce and could be introduced quickly to add power to antitank units facing the first of the new heavier German tanks. Similar vehicles also used by the Germans were the SU 122, a 122 mm Howitzer in the same vehicle and finally the SU 100 which carried the more powerful 100 mm antitank gun.

Heavy Assault guns based on the KV and Joseph Stalin chassis were also used. The first being the SU 152, the successor of the KV II.

The SU 122 and SU 152 photographs used in this handbook were taken in the German Panzer Test Establishment where these two examples were undergoing evaluation trials.







52

1944.  
Jagdpanzer SU 85 (r).  
(Samokhodnaya Ustanovka 85).

Crew: 4.  
Weight: 29.6 tons.  
Based upon the T34 tank chassis, this gun was introduced into Russian service during the early part of 1944. Very similar performance to the Panzer IV/70 (Sd.Kfz 162/1).  
(Photo: 50 Warpics).  
(For full details see Bellona Prints, Series 7).

1943/44.  
Sturmgeschuetz SU 122 (r).  
(Samokhodnaya Ustanovka 122).

Crew: 4.  
Weight: 30 tons.  
Basically the same vehicle as the SU 85, but armed with the 122mm Howitzer for Infantry support duties.  
(Photo: 51).

1944.  
Sturmpanzer SU 152 (r).  
Crew:  
Weight: 46 tons.  
152mm 37 Howitzer mounted in the KV chassis used as heavy assault vehicles to co-operate with infantry, also very similar was the JSU 152 – the same vehicle using the chassis of the JS tank.  
(Photo: 52).

1943/45.  
Jagdpanzer JSU 122 (r).  
Crew: 5.

Weight: 46 tons.  
Based upon the chassis of the Klimenti Vorishilov and Josef Stalin heavy tank, this vehicle was armed with the potent 122mm gun of 45 calibres length. Some had muzzle brakes fitted to the gun.  
(For full details see Bellona Prints, Series 22).

1945.  
Jagdpanzer SU 100 (r).  
Later version of the SU 85.  
(For full details see Bellona Prints, Series 2).

1941.  
le. Gepanzerter Artillerieschlepper 630 (r).  
Crew: 2.  
Weight: 4 tons.  
Russian MTH tracked carriers were used by Wehrmacht units for supply and training duties.

1941/2.  
Sturmpanzer KW II (r).  
(Klimenti Vorishilov II).  
Crew: 6.

Weight: 51 tons.  
Assault version of the KV 1 tank – armed with 152mm guns. It was well armed and armoured, but very cumbersome to use.  
(For full details see Bellona Prints, Series 4).  
(Photo: 53 Warpics).



# United Kingdom

The use of British equipment by the German Forces falls under two distinct headings, the first being the normal utilization of serviceable vehicles by field units, and the second being the bulk of which was captured from the B.E.F. in France 1940.

When the last ships sailed from Dunkirk on June 3rd 1940 they left behind the main supply of the heavy weapons and equipment of the British Army. This included Armoured vehicles and over 60,000 vehicles of all types. Along with this were some 2,500 guns. While much was destroyed before the evacuation, sufficient numbers of repairable vehicles were recovered and put to use by the Germans.

The most important from the point of view of this work, were the Bren Carriers which were used in very large numbers for many tasks. Most of the tanks recovered were used for test purposes and training, so our photograph of the Matilda converted to a selfpropelled gun carriage is extremely rare.



1942.

Le PAK auf Pz.Kpfw 'Matilda' (e)

Crew: 3/4.

Weight: Approx: 25 tons.

Improvisation on Matilda captured in France during 1940 campaign. The gun mounted, while appearing to be an antitank gun of French origin cannot be positively identified.

(Photo: 54 Axel Duckert).

1940.

Munitionsschlepper 'Bren' (e).

Unmodified Bren Carriers used as ammunition carriers. All these carriers were captured during the fall of France in 1940.

1941.

Munitionsschlepper 'Bren' mit MG 08 (e).

Bren carrier with World War I machine gun mounted on a pedestal.

1941.

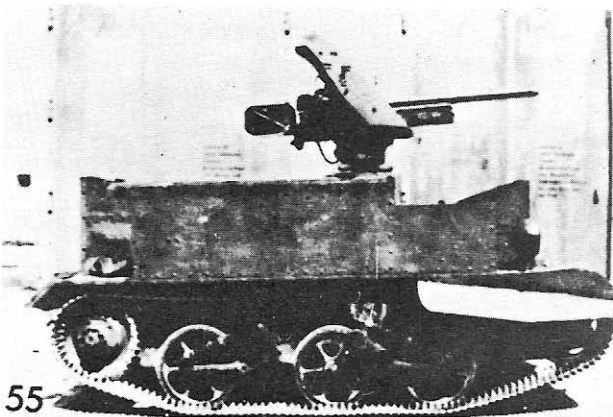
3.7cm PAK 35/36 auf Sfl. 'Bren' (e).

Crew: 3.

Weight:

A small number of the 3.7cm PAK were mounted on the Carrier chassis to improve mobility of these antitank weapons.

(Photo 55: MH 7732).



1942.

Le Feld Ladungstraeger 'Bren' (e).

Remote controlled Explosives carrier. The original superstructure was removed and a new housing for control gear and charge built on.

1941.

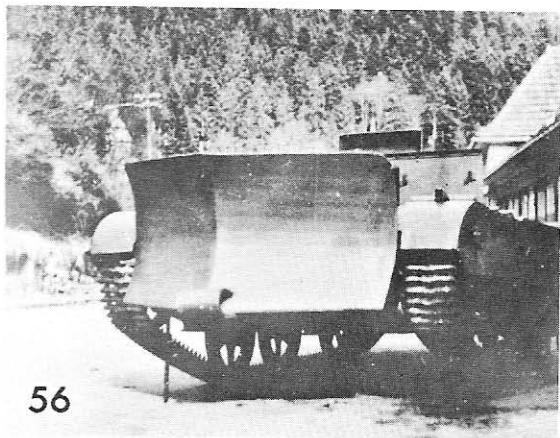
Schneeschaufel auf Sch. 'Bren' (e).

Crew: 2.

Weight:

Snowplough blade fitted to front of the Carrier. These snowploughs were used by the Luftwaffe to clear runways for Aircraft.

(Photo: 56).



# Glossary

NORMAL TERM (ABBREVIATED)	FULL TERM	ENGLISH TRANSLATION	NORMAL TERM (ABBREVIATED)	FULL TERM	ENGLISH TRANSLATION
Aufklaerung	—	Reconnaissance.	Moerser	—	Heavy Mortar/Howitzer.
auf	—	upon, on.	Mun.	Munition	Ammunition.
Ausf.	Ausfuehrung	Model, Mark.	Oder	—	or, alternatively.
Bef wg.	Befehlswagen	Command vehicle.	O.K.H.	Oberkommando Heer	Army High Command.
Carro comando Compagnia	—	Company command vehicle.	PAK	Panzerabwehrkanone	Antitank gun.
Chenilles	—	Carriage.	Pjk	Panzerjaegerkanone	Antitank gun adapted for use in Tank Hunter vehicles.
DA	—	Italian gun designation.	Pz.	Panzer	Armour, Tank.
D.A.K.	Deutsches Afrika Korps	—	Pz.Jaeg.	Panzerjaeger	Tank destroyer/fighter.
De	—	Of.	Pz.Kpfw.	Panzerkampfwagen	Battle tank.
e	—	and	Pz.Sp.Wg.	Panzerspaehtwagen	Reconnaissance Tank.
(e)	Englisch	English.	(r)	Russische	Russian.
Fahrschulwagen	—	Driver training vehicle.	RW.	Raketenwerfer	Rocket projector.
(f)	Franzoesisch	French.	S.	Schwere	Heavy.
Fahrzeug	—	Vehicle.	SU.	Sanokhooniye	Selfpropelled Gun.
Fgst.	Fahrgestell	Chassis.	Sch.	Schlepper	Carrier.
FH.	Feldhaubitze.	Field Howitzer.	SPW.	Schuetzenpanzerwagen	Armoured Infantry Carrier.
FK.	Feldkanone	Field gun (dual purpose — antitank and support).	Sd.Kfz.	Sanderkraftfahrzeug	Special purpose motor vehicle.
Flamm	—	Flame.	Semovente	—	Selfpropelled gun.
Flammenwerfer	—	Flame thrower.	s.FH.	Schwere Feldhaubitze	Heavy Field Haubitze.
Flak	Fliegerabwehrkanone	Anti Aircraft gun.	Sf. (Sfl.)	Selbstfahrlafette	Selfpropelled carriage.
Flakpanzer	—	Anti Aircraft tank.	SIG.	Schwere Infanteriegeschuetz	Heavy Infantry Gun.
fuer	—	for	Stu.G.	Sturmgeschuetz	Assault Gun.
gp.	Gepanzerte	Armoured.	Sturm.	—	Assault.
Granatwerfer	—	Mortar.	Sur	—	on.
GW.	Geschuetzwagen	Gun motor carriage.	(t)	Tchechoslowakische	Czechoslovakian.
(i)	Italien	Italian.	Traeger.	—	Transporter/Carrier.
Infanterie	—	Infantry.	und.	—	and.
IG.	Infanteriegeschuetz	Infantry gun.	Waffentraeger.	—	Weapons carrier/transporter.
Jdg. Pz.	Jagdpanzer	Tank hunter.	Wuframen.	—	Rocket projector racks.
Kleiner	—	Smaller.	Zug	—	Towing vehicle.
KwK	Kampfwagenkanone	Tank cannon.			
Kugelblitz	—	Ball lightning.			
Lad.	Ladungs	Cargo/load.			
L/-	Kaliberlange	Length of gun referred to in calibres.			
Le.	Leicht	Light.			
LeFH	Leichte Feldhaubitze	Light Field Howitzer.			
Marder	—	Marten			
MG	Maschiengerwer	Machine gun.			
Mit	—	with.			
Mittler	—	Medium.			



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